

STORMS AND WARNINGS. WEATHER AND CROPS.

STORMS AND WEATHER WARNINGS.

By H. C. FRANKENFIELD, Supervising Forecaster.

(Dated June 15, 1920.)

There were no general storms during the month, and but two local storm warnings were ordered. The first warnings were ordered on the morning of May 13 for the Atlantic coast from Point Judith, R. I., to Portsmouth, N. H. There was a moderate depression off the Virginia Capes, with an apparent northeastward movement, and strong NE. winds and probably gales were forecast for the afternoon and night following. Small craft warnings were also ordered to the southward as far as Delaware Breakwater, Del. The disturbance did not develop further, and only fresh to moderately strong winds occurred. The warnings were lowered at 9:30 p. m.

The second and last storm warning was ordered at 3:30 p. m., May 22, at which time the most pronounced disturbance of the month was over Minnesota, with some promise of further development. NE. warnings were ordered for Lake Superior and SW. warnings for Lakes Michigan and Huron. These warnings were partially verified as to Lakes Superior and Michigan, but failed on Lake Huron, as the storm moved rapidly off to the north-northeastward.

Several small craft warnings that were issued during the month were fully verified, and there were no storms without warning.

FROST WARNINGS.

Frost warnings were issued on 12 days, and they were well verified as a rule, but owing to the lateness of the season the early warnings were not of great importance. The general frosts that occurred on the morning of the 3d over the Lake Region were not forecast, rain having been expected from a LOW of the southwestern type that did not move as rapidly as had been anticipated.

Special frost warnings for the cranberry region of New Jersey were issued on eight dates, and all but one were justified.

Chicago, Ill., forecast district.—No frosts of consequence occurred during May in the southern portion of the Chicago forecast district, and on account of the backwardness of the season warnings were not required until much later than usual from the northern Rocky Mountain States eastward to the Great Lakes.

Frost warnings were issued for Wyoming on the 24th, for portions of Wyoming and Montana on the 25th and 31st, and for the western and central portions of South Dakota and Nebraska on the 26th. These warnings were only partially verified.

In the cranberry bogs of Wisconsin warnings were not needed until near the middle of the month and were issued on only four days. On the 14th heavy to killing

frost occurred without warning, due to a high-pressure area spreading southward over the upper Lake region with its crest over Wisconsin on the morning in question.—*Chas. L. Mitchell.*

New Orleans, La., forecast district.—Small craft warnings were issued for the Texas coast on May 11, 15, and 16, and were justified.

No general storm occurred on the coast without warnings.—*I. M. Cline.*

Denver, Colo., forecast district.—Special frost warnings were issued on the 1st for Utah and western Colorado, and on the 4th for the Grand Valley, Colo. The former was verified in western Colorado, but cloudiness prevailed in northern Utah, and the warning was only verified in part for the fruit districts of Utah. The warning of the 4th was verified at many stations in the Grand Valley and at two stations the temperature dropped nearly to the freezing point. A warning of freezing temperature was sent out on the 14th for localities in the Gunnison Valley which was not technically verified, although the temperature fell at several stations and nearly reached 32° at one station. Warnings of light frost were issued on the 15th for localities in Colorado and on the 18th and 26th for Gunnison Valley. Those of the 18th were partially verified and that of the 26th completely.—*A. H. Thiessen.*

San Francisco, Calif., forecast district.—Frosts occurred frequently in the north Pacific States, except near the coast, and in the plateau region. Frost warnings were issued in Washington 11 times, in Oregon and Idaho 13, and in Nevada 14. It is believed that the warnings were in all cases justified and that no damaging frost occurred without warnings.

Live-stock warnings were issued in eastern Washington on the 8th and in eastern Oregon, Idaho, and Nevada on the 8th and 21st.

Fire-weather warnings were issued in northwestern Oregon on the 18th, and in California and Nevada on the 18th and 26th. Both live-stock and fire-weather warnings were justified.

Southwest storm warnings were issued at the mouth of the Columbia River and Washington stations on the 16th and northwest warnings at Point Reyes on the 21st, and were generally verified.

The high winds at Tatoosh Island and the Puget Sound stations on the 20th were not forecast, as the report was missing from Tatoosh Island on that date, and the other reports received did not indicate the conditions off Vancouver Island at that time.—*G. H. Willson.*